

AMENDMENT TO THE DRAWINGS

The attached sheets of drawings includes Figure 3 to more clearly show that the wall of the process flow duct has a thickness. An annotated Figure 3 is also attached that highlights the change to that figure.

Attachment: Replacement Sheet(s)
 Annotated Sheet Showing Changes

REMARKS

The amendments to the specification proposed in the Amendment of November 29, 2010, are being resubmitted and with page and line numbers corresponding to the specification.

The drawings have been amended to overcome the objection and more clearly show the outline of the process liquid flow duct.

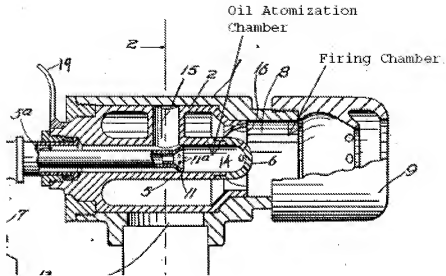
The rejection of claims 35 to 38 and 41 to 51 as not complying with the written description requirement has been overcome by deleting the section of independent claim 35 stating that the closed end of the mixing liquid feed duct faces an outlet of the process liquid flow duct. The other rejected claims depend on claim 35.

The rejection of claims 41 and 50 as being indefinite is moot in view of the cancellation of those claims.

The rejection of claim 49 as being indefinite has been overcome by amending the claim.

The rejection of claims 35 to 38 and 41 to 55 as being anticipated by Clements (USP 2,393,887) is traversed and has been overcome by amendment

Clements discloses a gas and oil burner having a firing chamber 8 and chamber 14 which feeds gaseous fuel or atomized liquid fuel to the firing chamber, as shown below in the annotated Figure 1 from Clements:



The firing chamber 8 in Clements is not a “process liquid flow duct” as is suggested in the Office Action at page 4. See Clements, col. 1, lns. 50-52, col. 2, lns. 25-29. Liquids do not flow into the firing chamber in Clements. The firing chamber receives gaseous fuel, Clements col. 1, lns. 50-52, or gasified fuel oil, Clements, col. 2, lns. 25-29, see also, col. 2, lns. 17-19. Because the firing chamber in Clements is not a process **liquid** flow duct, there is no anticipation.

Clements discloses a burner to burn gases, including gaseous fuel and gasified fuel oil. The liquid fuel oil entering the Clements burner is gasified in the chamber 14 using high pressure air to atomize the fuel oil. Clements, col. 2, lns 18-30. The gasified fuel oil is a gas as it passes through the nozzle 6 of chamber 14 and enters the firing chamber 8. Liquids are not gases. A liquid is a different phase of matter from a gas.

Similarly, a passage for a liquid is different than a passage for a gas. For example, a water pipe is different from an air duct. The difference is more than just than the fluid

that passes through the passage. Liquid passages are structurally adapted to convey a liquid and gas passages are structurally adapted to convey a gas. The particular structural features, e.g., coatings, dimensions and shapes, of a liquid passage are limiting features of the invention and are well within the level of ordinary skill in the art. Nevertheless, the recitation of liquid passages in the claims of this application distinguish the invention from the gas passages disclosed in Clements.

The air passage in Clements is not a liquid feeding duct. The Office Action at page 5 applies an air passage disclosed in Clements as a “feeding liquid duct.” The air passage in Clements includes the air supply conduit 5 that supplies air for the firing chamber 8. Clements, col. 38-42. An air passage is not a “feeding **liquid** duct” as is required by the claims.

There is also no anticipation because the claims, as amended, require a closed end of the mixing liquid feed duct and that the closed end be impervious to the flow of the mixture. A closed end has no openings in the end of the duct, as is shown at 156 in Figure 3 of this application. The oil and gas burner shown in Clements has nozzle orifices 6 in the end of firing chamber 8 and, thus, does not have a closed end.

There is also no anticipation because the claims require mixture discharge opening in the sidewall of the mixing liquid feed duct, and Clements discloses mixture discharge openings at the end of the chamber 6.

In addition, there is no anticipation because the claims require the chemical feed duct extends into the mixing space past the mixture discharge openings. The support for

the claim element for the extended chemical feed duct is in the specification at page 9, lines 8 – 10, for example. Clements does not disclose a duct extending into a mixing space and, particularly, does not show a duct extending past the nozzle orifices 6 in the end of the firing chamber 8.

All claims are in good condition for allowance. If any small matter remains outstanding, the Examiner is requested to telephone applicants' attorney. Prompt reconsideration and allowance of this application is requested.

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

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